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EXAMINER
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LUPINO, GINA M

ART UNIT	PAPER NUMBER
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3652

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/809,679

Applicant(s)

TAKAGI ET AL.

Examiner

Gina M. Lupino

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☒ Claim(s) 6-8, 11, 18, 21, 28, 36, 38, 42 and 44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                   |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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### **I. Drawings**

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or canceled from the claim(s):
  - 1.1. "a dispersing device". See claim 9, line 2.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:
  - 2.1. A, M, R, and 93. See Figures 1, 3, 6, 8, 10, 12, 16, 17, 21, and 22.
3. No new matter should be entered.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### **II. Claim Objections**

1. Claim 6 is objected to because it recites the following limitations:
  - 1.1. "the transport surface". However, there is no reference to "a transport surface" in claims 4 or 1.
  - 1.2. "the main surface". However, there is no reference to "a main surface" in claims 4 or 1.

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1.3. Therefore, there is insufficient antecedent basis for these limitations in the claim.

1.4. See claim 6, lines 2-4.

2. Claim 7 is objected to because it recites the limitation "the transport surface".

However, there is no reference to "a transport surface" in claims 4 or 1. Therefore, there is insufficient antecedent basis for this limitation in the claim. See claim 7, line 3.

3. Claim 8 is objected to because it recites the limitation "the transport passage".

However, there is no reference to "a transport passage" in claim 1. Therefore, there is insufficient antecedent basis for this limitation in the claim. See claim 8, line 3.

4. Claim 11 is objected to because it recites the following limitations:

4.1. "a location which is the closest". However, there is no reference to either "a location which is closest" or "a location closest" in claim 11.

4.2. "the length direction". However, there is no reference to "a length direction" in claim 11.

4.3. Therefore, there is insufficient antecedent basis for these limitations in the claim.  
See claim 11.

5. Claim 18 is objected to because it recites the limitation "the transport passage".

However, there is no reference to "a transport passage" in claims 18, 14, or 11. Therefore, there is insufficient antecedent basis for this limitation in the claim. See claim 18, line 3.

6. Claim 21 is objected to because it recites the following limitations:

6.1. "the width direction". However, there is no reference to "a width direction" in claim 21.

6.2. "the thickness direction". However, there is no reference to "a thickness direction" in claim 21.

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6.3. "the length direction". However, there is no reference to "a length direction" in claim 21.

6.4. "a location which is the closest". However, there is no reference to either "a location which is closest" or "a location closest" in claim 11.

6.5. Therefore, there is insufficient antecedent basis for these limitations in the claim. See claim 21.

7. Claim 28 is objected to because it recites the limitation "the transport passage". However, there is no reference to "a transport passage" in claims 28 or 21. Therefore, there is insufficient antecedent basis for this limitation in the claim. See claim 28, line 3.

8. Claim 36 is objected to because it recites the limitation "the transport surface". However, there is no reference to "a transport surface" in claims 36, 34, or 31. Therefore, there is insufficient antecedent basis for this limitation in the claim. See claim 36, lines 2, 4.

9. Claim 38 is objected to because it recites the limitation "the transport passage". However, there is no reference to "a transport passage" in claims 38 or 31. Therefore, there is insufficient antecedent basis for this limitation in the claim. See claim 38, line 3.

10. Claim 42 is objected to because it:

10.1. Recites the following limitations:

10.1(a) "a location which is the closest". However, there is no reference to either "a location which is closest" or "a location closest" in claim 42.

10.1(b) "the main surface". However, there is no reference to "a main surface" in claim 42.

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10.1(c) Therefore, there is insufficient antecedent basis for these limitations in the claim. See claim 42.

10.2. Contains a grammatical error. Claim 42 states "[I]n which the electronic chip components are move freely...", but should read, --[I]n which the electronic chip components move freely...--. See claim 42, lines 8-9.

11. Claim 44 is objected to because it recites the following limitations:

11.1. "the main surface". However, there is no reference to "a main surface" in claim 44.

11.2. "a location which is the closest". However, there is no reference to either "a location which is closest" or "a location closest" in claim 44.

11.3. Therefore, there is insufficient antecedent basis for this limitation in the claim. See claim 44.

### **III. Claim Rejections - 35 USC § 112**

The following is a quotation from the relevant paragraphs of 35 U.S.C. 112:

(2) The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 9 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1.1. Claims 9 and 19 state, "[T]ransported by the feeder such a density of electronic chip components near the cavities of the accommodating device may be made a target value."

1.2. This language is unclear, vague and therefore renders claims 9 and 19 indefinite.

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- 1.3. However, The Examiner will construe this language in claims 9 and 19 to mean the feeder may transport a predetermined value of chip components.

#### **IV. Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3, 4, 6-11, 13, 14, 16-21, 23, 24, 26-31, 33, 34, 36-40, 43, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by KIYOKAWA (U.S. Patent No. 6,019,564).

- 1.1. With respect to claim 1, KIYOKAWA discloses a handling device for electronic chip components with

1.1(a) An accommodating device 4 having a plurality of cavities 5 for putting electronic chip components into it, and

1.1(b) A feeder 3, 3F, 3R for supplying the electronic chip components to the accommodating device 4 where

1.1(b)(i) The accommodating device 4 can be moved and

1.1(b)(ii) At least two of the plurality of cavities 5 are simultaneously disposed at a location close to the feeder 3, 3F, 3R and

1.1(b)(iii) The electronic chip components are put into the cavities 5 from the feeder 3, 3F, 3R by performing a suction operation in the cavities

5. See column 5, lines 27-31, 41-50.

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1.1(c) See Figure 1.

1.2. With respect to claim 3, KIYOKAWA discloses a handling device, as discussed above, where, when the electronic chip components are put into the cavities 5 from the feeder 3, 3F, 3R, the electronic chip components are directly put into the cavities 5 without being moved along a main surface of the accommodating device 4. See Figure 1 and column 5, lines 41-46.

1.3. With respect to claim 4, KIYOKAWA discloses a handling device, as discussed above, where the accommodating device 4 is a rotating disk-shaped device having a main surface B, and the cavities 5 are disposed so as to be located close to the feeder 3, 3F, 3R as a result of rotation thereof. See Figure 1.

1.4. With respect to claim 6, KIYOKAWA discloses a handling device, as discussed above, where the transport surface of the feeder 3, 3F, 3R has a descending inclination relative to the accommodating device 4 and the main surface of the accommodating device 4 is inclined such that an angle between the main surface of the accommodating device 4 and the transport surface of the feeder 3 increases. See Figures 1, 2 and column 2, lines 44-47.

1.5. With respect to claim 7, KIYOKAWA discloses a handling device, as discussed above, where the main surface of the accommodating device 4 is inclined such that an angle between the main surface of the accommodating device 4 and the transport surface of the feeder 3 increases. See Figures 1, 2 and column 2, lines 44-47.

1.6. With respect to claim 8, KIYOKAWA discloses a handling device, as discussed above, where end portions of electronic chip components put or waiting to be put into the cavities 5 of the accommodating device 4 are capable of protruding into the transport passage of the feeder 3, 3F, 3R. See Figures 1, 2.

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- 1.7. With respect to claim 9, KIYOKAWA discloses a handling device, as discussed above, with a dispersing device 3, 3F, 3R, 8, 10, 11 for dispersing the electronic chip components being transported by the feeder 3, 3F, 3R such a density of electronic chip components near the cavities 5 of the accommodating device 4 may be made a target value. See column 5, lines 32-43.
- 1.8. With respect to claim 10, KIYOKAWA discloses a handling device, as discussed above, capable of measuring the electrical characteristics of the electronic chip components put into the cavities 5. See column 9, lines 12-13.
- 1.9. With respect to claim 11, KIYOKAWA discloses a handling device for electronic chip components with
- 1.9(a) An accommodating device 4 having a plurality of cavities 5 for putting electronic chip components into it, and
- 1.9(b) A feeder 3, 3F, 3R for supplying the electronic chip components to the accommodating device 4 where
- 1.9(b)(i) The accommodating device 4 can be moved and
- 1.9(b)(ii) At least one of the cavities 5 is successively disposed at a location which is the closest to the feeder 3, 3F, 3R
- 1.9(b)(iii) On a transport surface of the feeder 3, 3F, 3R, the electronic chip components are supported on only one side surface thereof, without fixing an orientation of the length direction of the electronic chip components, and
- 1.9(b)(iv) The electronic chip components are put into the cavities 5 from the feeder 3, 3F, 3R by performing a suction operation in the cavities 5. See column 5, lines 27-31, 41-50.
- 1.9(c) See Figure 1.

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- 1.10. With respect to claim 13, KIYOKAWA discloses a handling device, as discussed above, where when the electronic chip components are put into the cavities 5 from the feeder 3, 3F, 3R, the electronic chip components are directly put into the cavities 5 without being moved along a main surface of the accommodating device 4. See Figure 1 and column 5, 41-46.
- 1.11. With respect to claim 14, KIYOKAWA discloses a handling device, as discussed above, where the accommodating device 4 is a rotating disk-shaped device having a main surface B, and the cavities 5 are disposed so as to be located close to the feeder 3, 3F, 3R as a result of rotation thereof. See Figure 1.
- 1.12. With respect to claim 16, KIYOKAWA discloses a handling device, as discussed above, where the transport surface of the feeder 3, 3F, 3R has a descending inclination relative to the accommodating device 4 and the main surface of the accommodating device 4 is inclined such that an angle between the main surface of the accommodating device 4 and the transport surface of the feeder 3 increases. See Figures 1, 2 and column 2, lines 44-47.
- 1.13. With respect to claim 17, KIYOKAWA discloses a handling device, as discussed above, where the main surface of the accommodating device 4 is inclined such that an angle between the main surface of the accommodating device 4 and the transport surface of the feeder 3 increases. See Figures 1, 2 and column 2, lines 44-47.
- 1.14. With respect to claim 18, KIYOKAWA discloses a handling device, as discussed above, where end portions of electronic chip components put or waiting to be put into the cavities 5 of the accommodating device 4 are capable of protruding into the transport passage of the feeder 3, 3F, 3R. See Figures 1, 2.

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1.15. With respect to claim 19, KIYOKAWA discloses a handling device, as discussed above, with a dispersing device 3, 3F, 3R, 8, 10, 11 for dispersing the electronic chip components being transported by the feeder 3, 3F, 3R such a density of electronic chip components near the cavities 5 of the accommodating device 4 may be made a target value. See column 5, lines 32-43.

1.16. With respect to claim 20, KIYOKAWA discloses a handling device, as discussed above, capable of measuring the electrical characteristics of the electronic chip components put into the cavities 5. See column 9, lines 12-13.

1.17. With respect to claim 21, KIYOKAWA discloses a handling device for electronic chip components with

1.17(a) An accommodating device 4 having a plurality of cavities 5 for putting electronic chip components into it, and

1.17(b) A feeder 3, 3F, 3R for supplying the electronic chip components to the accommodating device 4 where

1.17(b)(i) The accommodating device 4 can be moved and

1.17(b)(ii) At least one of the cavities 5 is successively disposed at a location which is the closest to the feeder 3, 3F, 3R

1.17(b)(iii) On a transport surface of the feeder 3, 3F, 3R, the electronic chip components are freely oriented in the width direction and the thickness direction thereof and are supported on only one side surface thereof, without fixing an orientation of the length direction of the electronic chip components, and

1.17(b)(iv) The electronic chip components are put into the cavities 5 from the feeder 3, 3F, 3R by performing a suction operation in the cavities 5. See column 5, lines 27-31, 41-50.

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1.17(c) See Figure 1.

1.18. With respect to claim 23, KIYOKAWA discloses a handling device, as discussed above, where when the electronic chip components are put into the cavities 5 from the feeder 3, 3F, 3R, the electronic chip components are directly put into the cavities 5 without being moved along a main surface of the accommodating device 4. See Figure 1 and column 5, lines 41-46.

1.19. With respect to claim 24, KIYOKAWA discloses a handling device, as discussed above, where the accommodating device 4 is a rotating disk-shaped device having a main surface B, and the cavities 5 are disposed so as to be located close to the feeder 3, 3F, 3R as a result of rotation thereof. See Figure 1.

1.20. With respect to claim 26, KIYOKAWA discloses a handling device, as discussed above, where the transport surface of the feeder 3, 3F, 3R has a descending inclination relative to the accommodating device 4 and the main surface of the accommodating device 4 is inclined such that an angle between the main surface of the accommodating device 4 and the transport surface of the feeder 3 increases. See Figures 1, 2 and column 2, lines 44-47.

1.21. With respect to claim 27, KIYOKAWA discloses a handling device, as discussed above, where the main surface of the accommodating device 4 is inclined such that an angle between the main surface of the accommodating device 4 and the transport surface of the feeder 3 increases. See Figures 1, 2 and column 2, lines 44-47.

1.22. With respect to claim 28, KIYOKAWA discloses a handling device, as discussed above, where end portions of electronic chip components put or waiting to be put into the cavities 5 of the accommodating device 4 are capable of protruding into the transport passage of the feeder 3, 3F, 3R. See Figures 1, 2.

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1.23. With respect to claim 29, KIYOKAWA discloses a handling device, as discussed above, with a dispersing device 3, 3F, 3R, 8, 10, 11 for dispersing the electronic chip components being transported by the feeder 3, 3F, 3R such a density of electronic chip components near the cavities 5 of the accommodating device 4 may be made a target value. See column 5, lines 32-43.

1.24. With respect to claim 30, KIYOKAWA discloses a handling device, as discussed above, capable of measuring the electrical characteristics of the electronic chip components put into the cavities 5. See column 9, lines 12-13.

1.25. With respect to claim 31, KIYOKAWA discloses a handling device for electronic chip components with

1.25(a) An accommodating device 4 having a plurality of cavities 5 for putting electronic chip components into it, and

1.25(b) A feeder 3, 3F, 3R for supplying the electronic chip components to the accommodating device 4 where

1.25(b)(i) the accommodating device 4 can be moved and

1.25(b)(ii) At least one of the cavities 5 is successively disposed at a location close to the feeder 3, 3F, 3R, and the electronic chip components are made to float in air by a floating unit of the feeder and, by performing a suction operation in the cavities, the electronic chip components in the air are put into the cavities. See column 5, lines 27-31, 41-50.

1.25(c) See Figure 1.

1.26. With respect to claim 33, KIYOKAWA discloses a handling device, as discussed above, where when the electronic chip components are put into the cavities 5 from the feeder 3, 3F, 3R, the electronic chip components are directly put into the

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cavities 5 without being moved along a main surface of the accommodating device

4. See Figure 1 and column 5, 41-46.

1.27. With respect to claim 34, KIYOKAWA discloses a handling device, as discussed above, where the accommodating device 4 is a rotating disk-shaped device having a main surface B, and the cavities 5 are disposed so as to be located close to the feeder 3, 3F, 3R as a result of rotation thereof. See Figure 1.

1.28. With respect to claim 36, KIYOKAWA discloses a handling device, as discussed above, where the transport surface of the feeder 3, 3F, 3R has a descending inclination relative to the accommodating device 4 and the main surface of the accommodating device 4 is inclined such that an angle between the main surface of the accommodating device 4 and the transport surface of the feeder 3 increases. See Figures 1, 2 and column 2, lines 44-47.

1.29. With respect to claim 37, KIYOKAWA discloses a handling device, as discussed above, where the main surface of the accommodating device 4 is inclined such that an angle between the main surface of the accommodating device 4 and the transport surface of the feeder 3 increases. See Figures 1, 2 and column 2, lines 44-47.

1.30. With respect to claim 38, KIYOKAWA discloses a handling device, as discussed above, where end portions of electronic chip components put or waiting to be put into the cavities 5 of the accommodating device 4 are capable of protruding into the transport passage of the feeder 3, 3F, 3R. See Figures 1, 2.

1.31. With respect to claim 39, KIYOKAWA discloses a handling device, as discussed above, with a dispersing device 3, 3F, 3R, 8, 10, 11 for dispersing the electronic chip components being transported by the feeder 3, 3F, 3R such a density of

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electronic chip components near the cavities 5 of the accommodating device 4 may be made a target value. See column 5, lines 32-43.

1.32. With respect to claim 40, KIYOKAWA discloses a handling device, as discussed above, capable of measuring the electrical characteristics of the electronic chip components put into the cavities 5. See column 9, lines 12-13.

1.33. With respect to claim 43, KIYOKAWA discloses a handling method for electronic chip components, with the steps of

1.33(a) Providing an accommodating device 4 with a plurality of cavities 5, and

1.33(b) Putting electronic chip components into the accommodating device 4 from a feeder 3, 3F, 3R for supplying the electronic chip components, where

1.33(c) By performing a suction operation in at least two of the cavities 5 simultaneously disposed at a location close to the feeder 3, 3F, 3R, the electronic chip components are put into the cavities 5 from the feeder 3, 3F, 3R.

1.33(d) See column 2, lines 24-26, column 5, lines 27-31, and column 6, lines 5-6, 37-39.

1.34. With respect to claim 44, KIYOKAWA discloses a handling method, as discussed above, with the steps of

1.34(a) Providing an accommodating device 4 with a plurality of cavities 5, and

1.34(b) Putting electronic chip components into the accommodating device 4 from a feeder 3, 3F, 3R for supplying the electronic chip components, where

1.34(c) By performing a suction operation in at least one cavity 5 disposed at a location which is closest to the feeder 3, 3F, 3R, the electronic chip components are directly put into the cavities 5 from the feeder 3, 3F, 3R without being moved along the main surface of the accommodating device 4.

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1.34(d) See column 2, lines 24-26, column 5, lines 27-31, and column 6, lines 5-6, 37-39.

#### **V. Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 5, 15, 25, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over KIYOKAWA (U.S. Patent No. 6,019,564).

1.1. With respect to claim 5, KIYOKAWA discloses a handling device, as discussed above, with an accommodating device 4.

1.1(a) However, although KIYOKAWA fails to teach the accommodating device's rotation axis is in a substantially horizontal position, it would have been obvious to one of ordinary skill in the art to rotate the accommodating device of KIYOKAWA so that its rotation axis is in a substantially horizontal position.

1.2. With respect to claim 15, KIYOKAWA discloses a handling device, as discussed above, with an accommodating device 4.

1.2(a) However, although KIYOKAWA fails to teach the accommodating device's rotation axis is in a substantially horizontal position, it would have been obvious to one of ordinary skill in the art to rotate the accommodating device of KIYOKAWA so that its rotation axis is in a substantially horizontal position.

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1.3. With respect to claim 25, KIYOKAWA discloses a handling device, as discussed above, with an accommodating device 4.

1.3(a) However, although KIYOKAWA fails to teach the accommodating device's rotation axis is in a substantially horizontal position, it would have been obvious to one of ordinary skill in the art to rotate the accommodating device of KIYOKAWA so that its rotation axis is in a substantially horizontal position.

1.4. With respect to claim 35, KIYOKAWA discloses a handling device, as discussed above, with an accommodating device 4.

1.4(a) However, although KIYOKAWA fails to teach the accommodating device's rotation axis is in a substantially horizontal position, it would have been obvious to one of ordinary skill in the art to rotate the accommodating device of KIYOKAWA so that its rotation axis is in a substantially horizontal position.

2. Claims 2, 12, 22, 32, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over KIYOKAWA (U.S. Patent No. 6,019,564) in view of SAITO (Japanese Patent No. 363,295,323A).

2.1. With respect to claim 2, KIYOKAWA discloses a handling device, as discussed above, where

2.1(a) The electronic chip components can be put into the cavities 5.

2.1(b) However, KIYOKAWA fails to teach the feeder is a circulatory feeder.

2.1(c) SAITO teaches a circulatory feeder. See Figure 1.

2.1(d) Therefore, it would have been obvious to one of ordinary skill in the art to modify the feeder of KIYOKAWA with the circulatory feeder of SAITO in order to freely move the electronic chip components into the handling device.

2.2. With respect to claim 12, KIYOKAWA discloses a handling device, as discussed above, where

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2.2(a) The electronic chip components can be moved freely with any orientation and can be put into the cavities 5 in a free order.

2.2(b) However, KİYOKAWA fails to teach the feeder is a circulatory feeder.

2.2(c) SAITO teaches a circulatory feeder. See Figure 1.

2.2(d) Therefore, it would have been obvious to one of ordinary skill in the art to modify the feeder of KİYOKAWA with the circulatory feeder of SAITO in order to freely move the electronic chip components into the handling device.

2.3. With respect to claim 22, KİYOKAWA discloses a handling device, as discussed above, where

2.3(a) The electronic chip components can be moved freely with any orientation and can be put into the cavities 5 in a free order.

2.3(b) However, KİYOKAWA fails to teach the feeder is a circulatory feeder.

2.3(c) SAITO teaches a circulatory feeder. See Figure 1.

2.3(d) Therefore, it would have been obvious to one of ordinary skill in the art to modify the feeder of KİYOKAWA with the circulatory feeder of SAITO in order to freely move the electronic chip components into the handling device.

2.4. With respect to claim 32, KİYOKAWA discloses a handling device, as discussed above, where

2.4(a) The electronic chip components can be moved freely with any orientation and can be put into the cavities 5 in a free order.

2.4(b) However, KİYOKAWA fails to teach the feeder is a circulatory feeder.

2.4(c) SAITO teaches a circulatory feeder. See Figure 1.

2.4(d) Therefore, it would have been obvious to one of ordinary skill in the art to modify the feeder of KİYOKAWA with the circulatory feeder of SAITO in order to freely move the electronic chip components into the handling device.

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2.5. With respect to claim 41, KIYOKAWA discloses a handling device for electronic chip components with

2.5(a) An accommodating device 4 having a plurality of cavities 5 for putting chip-type electronic components into it,

2.5(b) A transport portion 3, 3F, 3R for transporting the electronic chip components to the cavities 5 in the accommodating device 4

2.5(c) A suction block having a transport passage linked to the transport portion and putting the electronic chip components into the transport passage by a suction operation. See column 5, lines 27-31, 41-50.

2.5(d) And a feeder 3, 3F, 3R for supplying the electronic chip components to a location 5 near an entrance of a transport passage of a suction block 3F, 3R. See Figures 1, 2.

2.5(e) However, KIYOKAWA fails to teach the feeder is a circulatory feeder in which the electronic chip components move freely with any orientation thereof in a free direction and the electronic chip components are supplied to the transport passage of the suction block in a free order.

2.5(f) SAITO teaches a circulatory feeder. See Figure 1.

2.5(g) Therefore, it would have been obvious to one of ordinary skill in the art to modify the feeder of KIYOKAWA with the circulatory feeder of SAITO.

2.6. With respect to claim 42, KIYOKAWA discloses a handling device for electronic chip components with

2.6(a) An accommodating device 4 having a plurality of cavities 5 for putting electronic chip components into it, and

2.6(b) A feeder 3, 3F, 3R for supplying the electronic chip components to the accommodating device 4, where

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2.6(c) The accommodating device can be moved and at least one of the cavities is successively disposed at a location which is the closest to the feeder, and

2.6(d) By performing a suction operation in the cavities 5, the electronic chip components are directly put into the cavities 5 from the feeder 3, 3F, 3R without being moved along the main surface of the accommodating device 4. See column 5, lines 27-31, 41-50.

2.6(e) And a feeder 3, 3F, 3R for supplying the electronic chip components to a location 5 near an entrance of a transport passage of a suction block 3F, 3R. See Figures 1, 2.

2.6(f) However, KIYOKAWA fails to teach the feeder is a circulatory feeder in which the electronic chip components move freely with any orientation thereof and the electronic chip components are supplied to the cavities in a free order.

2.6(g) SAITO teaches a circulatory feeder. See Figure 1.

2.6(h) Therefore, it would have been obvious to one of ordinary skill in the art to modify the feeder of KIYOKAWA with the circulatory feeder of SAITO.

## **VI. Conclusion**

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina M. Lupino whose telephone number is (571) 272-6557. The examiner can normally be reached on 8:30am - 5:00pm EST.
3. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen D. Lillis can be reached on (571) 272-6928. The fax phone

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number for the organization where this application or proceeding is assigned is (571) 273-8300.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

5. GML



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